



REPORT N° INF2019-000

Date	08/10/2019
Submitted by	Philippe Cormier
Subject	Biosolids lagoons – Annual Report
File N°	INF2019-000

1) **NATURE/GOAL :**

The purpose of this report is to present to Council the annual report of the Clarence-Rockland wastewater treatment plant's biosolids lagoons completed as required under the site's Environmental Compliance Approval (ECA).

2) **DIRECTIVE/PREVIOUS POLICY :**

N/A

3) **DEPARTMENT'S RECOMMENDATION :**

BE IT RESOLVED that the report titled "2018 Monitoring Program Annual Report – Biosolids Storage Lagoons", be received.

QU'IL SOIT RESOLU QUE le rapport intitulé "2018 Monitoring Program Annual Report – Biosolids Storage Lagoons", soit reçu.

4) **BACKGROUND :**

In 1997, a new wastewater treatment plant was built in Rockland to replace the lagoon treatment system.

From 1997 to 2002, the excess biosolids produced during the treatment process were pumped 400m to the previous treatment lagoon site located at the end of Industrielle road.

In the fall of 2002, the new biosolids lagoons were constructed and operational by early 2003. The new lagoons consist of two (2) lagoons, each of 0.14 hectare in size and are located on land once formerly occupied by the aerations lagoons, situated approximately 50 meters north of the wastewater treatment plant.

A requirement of the construction of the biosolids lagoons was to install monitoring wells around the perimeter in order to monitor their integrity (sealed containment) and ensure that they did not impact existing groundwater. In addition to the groundwater monitoring plan an "emergency action plan" was established in order to address a groundwater impact by the lagoons.

Over the course of several years, additional monitoring wells were installed in response to the Ministry of the Environment/Conservation and Parks Climate Change (MOECP) review of the 2016 annual report.

5) **DISCUSSION :**

The intent of the groundwater testing is to assess the impact of any leakage from the lagoons. Condition 2.0 of the Lagoons Environmental Compliance Approval (ECA) requires the ground water to be sampled as part of the annual monitoring program. Two monitoring session are preformed through out the year:

- Spring monitoring, and ;
- Fall monitoring

The 2018 annual report was completed by Terrapex Environmental LTD.

During both spring and fall monitoring sessions, groundwater levels were measured and groundwater samples were collected in all existing monitoring wells, with the following exceptions:

- Monitoring well MW-5 was observed to be in a state of disrepair and therefore could not be sampled in 2018.

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(Terrapex recommends that monitoring well MW-5 be abandoned by licenced Ontario well driller (as per O.Reg 903) and a new monitoring well be installed (as a replacement) and included in the 2019 monitoring and sampling program.)

Impacts at monitoring wells located down gradient of the lagoons have been monitored since 2013. Based on the analytical results and review of previously reported data, monitoring wells MW-2, BH03-4 and MW11-8 appear to be impacted by the biosolid lagoon operations. No discernible concentration trend is apparent monitoring well MW17-01. However currently it appears that the groundwater in its vicinity is not impacted by biosolid lagoon operations. Off-site impacts to neighbouring properties and the Ottawa River are not indicated to be occurring. Considering that the Lagoons were relined with clay in 2011 and 2012, additional upgrading to the liners is unlikely to significantly improve the ground water quality.

6) **CONSULTATION:**

N/A

7) **RECOMMENDATIONS OR COMMENTS FROM COMMITTEE/ OTHER DEPARTMENTS :**

N/A

8) **FINANCIAL IMPACT (expenses/material/etc.):**

N/A

9) **LEGAL IMPLICATIONS :**

N/A

10) **RISK MANAGEMENT :**

The investigation at MW17-2 indicated that there is no saturated sand unit in that area. Therefore, it is interpreted that MW-4 is likely completed in the clay, and that easternmost extend of groundwater impacts in the sand somewhere west of MW-4. Further monitoring at MW17-2 will determine whether the sand unit at MW17-2 is always unsaturated.

11) **STRATEGIC IMPLICATIONS :**

N/A

12) **SUPPORTING DOCUMENTS:**

2018 Monitoring Program Annual Report – Biosolids Storage Lagoons